DEPARTMENT of ENVIRONMENTAL SERVICES Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: CRESCE	NT LAKE	Lake Area (ha):	47.02
Town:	ACWORTH	Maximum depth (m):	7.3
County:	Sullivan	Mean depth (m):	3.2
River Basin:	Connecticut	Volume (m³):	1526500
Latitude:		Relative depth:	0.9
Longitude:	72°15'20" W	Shore configuration:	2.10
Elevation (f	t): 1215	Areal water load (m/yr): 12.17
Shore length	(m): 5100	Flushing rate (yr^{-1}) :	3.70
Watershed are	ea (ha): 1183.6	P retention coeff.:	0.53
% watershed p	ponded: 0.0	Lake type: natur	al w/dam

BIOLOGICAL:	1 February 1993	7 July 1992
DOM. PHYTOPLANKTON (% TOTAL) #1	DINOBRYON 95%	CHRYSOSPHAERELLA 70%
#2		ASTERIONELLA 15%
#3		RHIZOSOLENIA 5%
PHYTOPLANKTON ABUNDANCE (cells/mL)		705
CHLOROPHYLL-A (µg/L)		3.84
DOM. ZOOPLANKTON (% TOTAL) #1	SYNCHAETA 54%	KERATELLA 38%
#2	KERATELLA 39%	POLYARTHRA 22%
#3		VORTICELLA 14%
ROTIFERS/LITER	108	183
MICROCRUSTACEA/LITER	<1	22
ZOOPLANKTON ABUNDANCE (#/L)	114	244
VASCULAR PLANT ABUNDANCE		Scat/Common
SECCHI DISK TRANSPARENCY (m)		4.3
BOTTOM DISSOLVED OXYGEN (mg/L)	8.1	0.5
BACTERIA (E. coli, #/100 ml) #1		11
#2		1
#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 4.9
Hypolimnion volume (m³): 26500
Anoxic volume (m³): 21500

CHEMICAL:			CRESCENT ACWORTH	LAKE	
	1 February 1993		7 July 1992		
DEPTH (m)	2.0	4.0	2.0	5.0	6.5
pH (units)	6.0	6.0	6.7	6.4	5.9
A.N.C. (Alkalinity)	2.3	2.9	2.5	3.5	4.2
NITRATE NITROGEN	0.06	0.06	< 0.02	< 0.02	< 0.02
TOTAL KJELDAHL NITROGEN	0.11	0.11			
TOTAL PHOSPHORUS	0.009	0.009	0.007	0.012	0.017
CONDUCTIVITY (µmhos/cm)	39.8	40.4	39.2	39.6	42.7
APPARENT COLOR (cpu)	24	26	16	17	27
MAGNESIUM			0.59		
CALCIUM			2.2		
SODIUM			3.1		
POTASSIUM			0.80		
CHLORIDE	4	4	5	5	5
SULFATE	6	6	6	5 .	6
TN : TP	19	19			
CALCITE SATURATION INDEX			3.9		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1992

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
4	2	2	0	8	Meso.

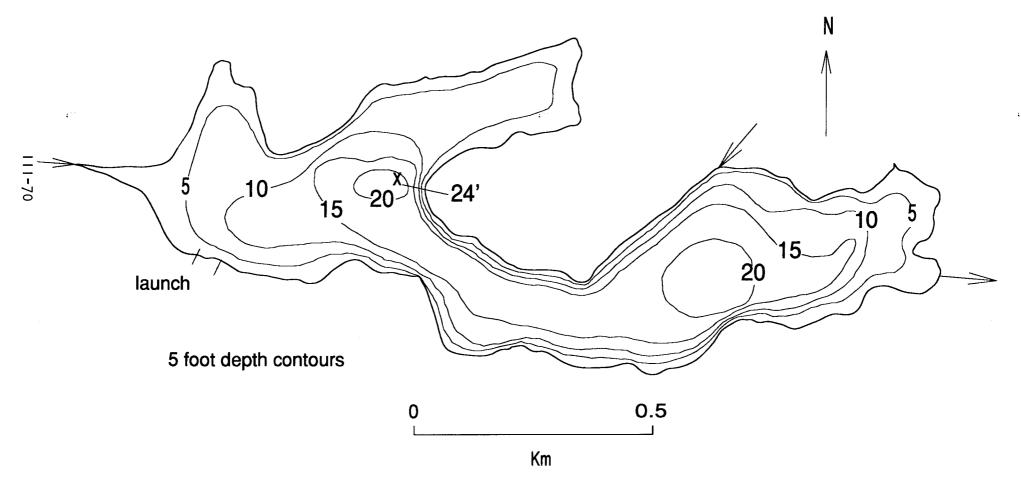
COMMENTS:

- 1. Launch site was adequate but needs some repair; it is into shallow water.
- 2. This pond was previously surveyed and classified in 1979.

 There was no change in the assigned trophic classification and little change in water quality.
- 3. The dominant genera of wholewater phytoplankton were Rhizosolenia (20%), Merismopedia (15%), Cryptomonas (15%) and tiny green flagellates (10%).

Crescent Lake

Acworth



FIELD DATA SHEET

LAKE: CRESCENT LAKE

DATE: 07/07/92

TOWN: ACWORTH

WEATHER: PARTLY SUNNY; WARM & BREEZY

DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
0.1	20.5	9.2	101 %
1.0	20.5	9.2	101 %
2.0	20.2	9.1	100 %
3.0	19.8	9.1	98 %
4.0	19.0	8.5	91 %
5.0	13.9	2.6	23 %
6.0	10.1	0.7	6 %
6.5	10.1	0.5	4 %
	·		

SECCHI DISK (m): 4.3

COMMENTS:

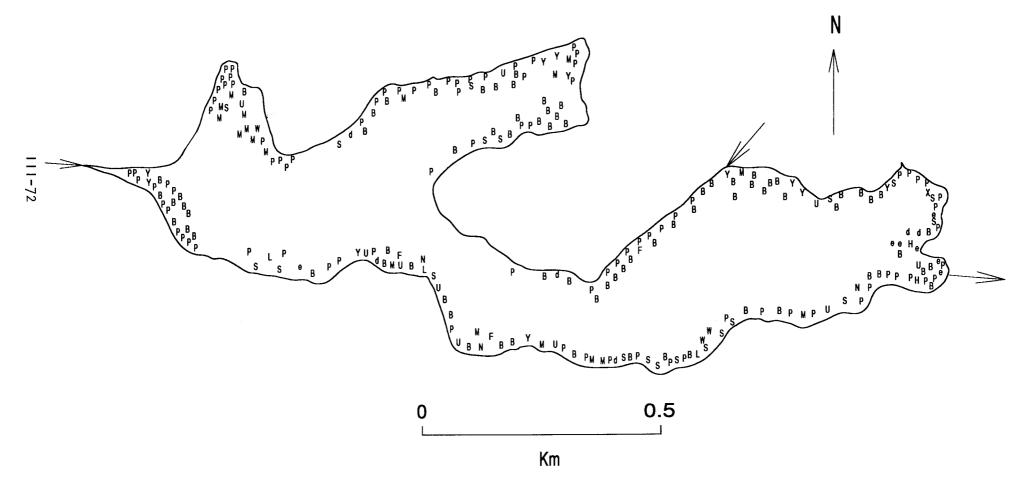
BOTTOM DEPTH (m): 6.8

TIME: 1330

*Dissolved oxygen values are in mg/L

Crescent Lake

Acworth



AQUATIC PLANT SURVEY

LAK	E: CRESCENT LAKE	TOWN: ACWORTH	DATE: 07/07/92	
Key	PLANT	NAME	ABUNDANCE	
ncy	GENERIC	COMMON	ADONDANCE	
P	Pontederia cordata	Pickerelweed	Scat/Common	
ď	Dulichium arundinaceum	Three-way sedge	Sparse	
S	Sparganium	Bur reed	Scattered	
В	Brasenia schreberi	Water shield	Scat/Common	
е	Eleocharis	Spike rush	Scattered	
Y	Nuphar	Yellow water lily	Sparse	
บ	Utricularia	Bladderwort	Scattered	
M	Myriophyllum humile	Water milfoil	Scat/Common	
L	Lobelia dortmanna	Water lobelia	Sparse	
F	Nymphoides cordatum	Floating heart	Sparse	
N	Nymphaea	White water lily	Sparse	
W	Potamogeton	Pondweed	Sparse	
Х		Sterile thread-like leaf	Sparse	
Н	Equisetum	Horsetail	Sparse	
E	Eriocaulon septangulare	Pipewort	Sparse	
		-	*	

OVERALL ABUNDANCE: Scat/Common

GENERAL OBSERVATIONS:

- 1. Plants were very common in some of the coves, but were scattered/common overall.
- 2. The water milfoil (a native species) was common along most of the bottom in the shallow coves.
- 3. Two turtles observed.